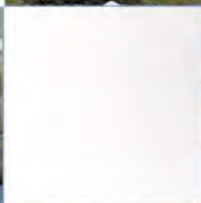


Colinton Kirk Manse, Colinton, Edinburgh: Archaeological Monitored Topsoil Strip: Written Scheme of Investigation

AOC Project No. 28889

Planning Reference: 25/05871/FUL

2nd April 2026



Colinton Kirk Manse, Colinton, Edinburgh: Archaeological Monitored Topsoil Strip Written Scheme of Investigation

On Behalf of:	Colinton Parish Church 4 Dell Road Edinburgh EH13 0JR
National Grid Reference (NGR):	NT 21620 69144
AOC Project No:	28889
Planning Reference:	25/05871/FUL
Prepared by:	
Illustration by:	
Date of Report:	2 nd April 2026

This document has been prepared in accordance with AOC standard operating procedures.

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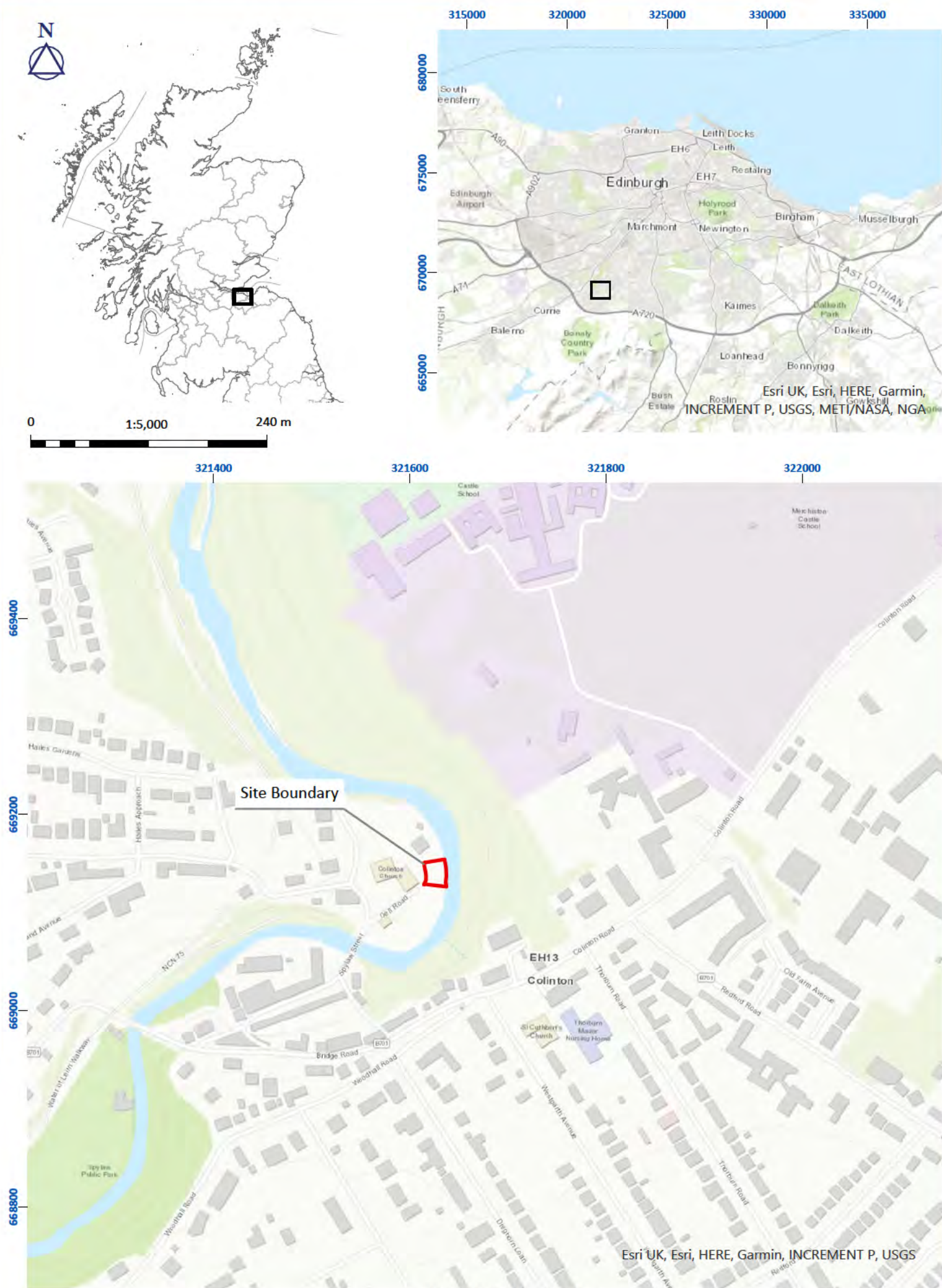


Figure 1: Site location plan

01/28889/WSI/01/01



Figure 2: Area for Monitored Topsoil Strip

01/28889/WSI/02/01

1 INTRODUCTION

- 1.1 An archaeological monitored topsoil strip is required by Colinton Church prior to the construction of five new parking spaces at the Colinton Church Manse (National Grid Reference (NGR): NT 21620 69144; Planning Reference 25/05871/FUL). The Site lies within the administrative area of City of Edinburgh Council who is advised on archaeological matters by the City of Edinburgh Council Archaeology Service (CECAS).
- 1.2 The requirement for a programme of archaeological works is in keeping with best practice requirements outlined in current planning guidelines *National Planning Framework 4* (Scottish Government 2023).
- 1.3 This Written Scheme of Investigation (WSI) details how the requirements of the archaeological works will be met. The first part is site specific, detailing the requirements of the archaeological works (Stage 1), as well as any appropriate archaeological mitigation measures (Stage 2), which may consist of further fieldwork (e.g. excavation) or provision by the works which would allow preservation in situ of any buried archaeological material. It also details the requirements of any suitable post-excavation analysis and publication of discovered archaeological remains (Stage 3), if appropriate. The appendices detail relevant AOC Archaeology Group's operating procedures and standards.

2 PROJECT BACKGROUND

2.1 Site Location

- 2.1.1 The Site is located to the east of Colinton Church (NGR: NT 21620 69144; Figure 1) within Colinton in Edinburgh. The Site is bound to the east and south by the Water of Leith and by the Colinton manse to the north. The Site lies within the administrative area of City of Edinburgh Council who is advised on archaeological matters by CECAS.
- 2.1.2 The British Geological Survey (BGS) records the underlying bedrock as a Strathclyde Group Gullane Formation – a sedimentary rock of fluvial, palustrine and shallow-marine origin (BGS 2026). It dates to the Carboniferous period between 346.7 to 337 million years ago (ibid.). This is overlain by an Alluvium – a sedimentary deposit of fluvial origin and dating to the Quaternary period between 2.58 million years ago and the present (ibid.).
- 2.1.3 Topographically, the Site is recorded at an elevation of 96m above Ordnance Datum (aOD).

2.2 Archaeological Background

- 2.2.1 Early maps tend to be schematic and lacking in detail, however, they can indicate settlements and prior land use. Roy's Military Survey of Scotland (Lowlands) 1752-1757 details the small settlement of 'Colintonkirk' to the east of the Water of Leith.



Extract 1: Roy's Military Survey of Scotland (Lowlands), 1752-1757.

2.2.2 The First Edition Ordnance Survey indicates the presence of the church and manse at the Site, but also elucidates on the numerous mills which were located along the Water of Leith. The map details the Spylaw Mill to the south and the Hailes Mill further northwest of the Site.



Extract 2: First Edition Ordnance Survey 6-Inch. Edinburghshire 6. Surveyed: 1877. Published: 1890.

- 2.2.3 The Second Edition Ordnance Survey shows a similar layout to the previous iteration, however, the Hailes mill is no longer depicted.



Extract 3: Second Edition Ordnance Survey 6-Inch. Edinburghshire VII.NW. Surveyed: 1892. Published: 1895.

- 2.2.4 The Site, though relatively small and likely undeveloped, sits within a wider area of historical significance. The Site is located within the Colinton Conservation Area, and within 100m of the Site, there are seven Listed Buildings. Three of the listings are of buildings or areas which are ecclesiastical in nature, relating to the local parish church.
- 2.2.5 The Site sits within the Colinton Conservation Area which is located to the southwest of the city, and borders the Pentland Hills in the south. The Colinton Conservation Area Character Appraisal of 2020 has divided the conservation area into six zones with the Site and surrounding area being sectioned into the village zone.
- 2.2.6 Described as 'St Cuthbert's Parish Church' the Colinton Parish church (LB26874), as it stands today, is mostly of early 20th century date with an older tower dating to 1837. There have been several previous iterations of the church. This includes the original late 11th century building which was apparently founded by Prince Etheldred, which was likely destroyed in the mid-16th century. The associated churchyard is listed separately and contains numerous family burial enclosures and a Mausoleum to James Gillespie (LB26875). The Inventory of Graveyard and Cemetery Sites in Scotland estimate there are 171 burials within the burial ground, with the earliest dating to c.1660 and the most recent to 1977 (NRHE ID: 275010). The burial ground to the north seems to have been extended onto the site of a former paper mill.

- 2.2.7 The Colinton Manse, or St Cuthbert's Manse (LB28652), is located to the immediate north of the development area. The manse is a B-Listed building which dates originally to 1784 with later 19th and 20th century modifications.
- 2.2.8 The other listed buildings within the area are a War Memorial (LB49561), two cottages (LB29817 and LB30257) and the Bridge between Spylaw Street and Dell Road (LB27951).
- 2.2.9 An early account makes note of the ruins of a watermill to the north of the site, however, the mill was no longer visible in 1975 (NRHE ID: 51773). The location noted for the mill makes it likely to be the Hailes Mill noted on Ordnance Survey mapping above.

3 OBJECTIVES

- 3.1 The objectives of the archaeological works are:
- i) To determine and assess the character, extent, condition, quality, date and significance of any buried archaeological remains within the proposed development area.
 - ii) to report on the results of the works and to advise and implement an appropriate form of mitigation, formulated with the approval of CECAS on behalf of City of Edinburgh Council, such as excavation (Stage 2), post-excavation analyses and publication (Stage 3), given the infeasibility of preserving the archaeological material in situ, should significant archaeological remains be affected.

4 PROGRAMME OF ARCHAEOLOGICAL WORKS

4.1 Monitored Topsoil Strip

- 4.1.1 The details of the monitored topsoil strip are designed to meet the requirements of the City of Edinburgh Council as advised by CECAS.
- 4.1.2 The monitored topsoil strip will be achieved through the removal of topsoil and overburden using a mechanical excavator equipped with a smooth bladed ditching bucket. The monitored topsoil strip will aim to establish the extent, condition, character, quality and date of any archaeological features present. Excavation will be in shallow units/spits until the first significant archaeological horizon or natural drift geology is reached. The monitored strip area may be extended around specific archaeological features to determine their lateral extent (while remaining within the development area). All machine excavation will be supervised by an experienced field archaeologist.
- 4.1.3 All archaeological work will satisfy the codes, standards and guidance set out by the Chartered Institute for Archaeologists.

(https://archaeologists.net/sites/default/files/2024-11/ClfA-Standard-Archaeological-Monitoring-Recording_2023.pdf)

- 4.1.4 In the instance of a limited amount of significant archaeology being encountered, AOC Archaeology will begin the excavation of it immediately, in accordance with Appendix 9. In the event of more extensive significant archaeology being encountered, AOC Archaeology would request an on-site meeting with the client and CECAS to discuss an appropriate mitigation strategy. Where possible significant archaeological material will be preserved in situ.
- 4.1.5 Should human remains be unearthed, then these will be left in situ, covered and protected. The local police will be informed. If removal is considered necessary by CECAS this will only take place with police approval, and in compliance with Historic Scotland's Operational Policy Paper 'The Treatment of Human Remains in Archaeology'.
- 4.1.6 Plans and sections of any archaeological features identified and, where possible, of individual features shall be produced at appropriate scales.
- 4.1.7 All finds of archaeological interest shall be retained and removed from the site and cleaned, catalogued and appropriately packaged.

4.2 Public Outreach

- 4.2.1 Where significant or noteworthy remains are identified a programme of public outreach shall be developed as part of the mitigation. This will be in line with ALGAO Scotland's Delivery of Public Benefit and Social Value Guidance for Archaeology in the Planning Process (2023).

[https://www.algao.org.uk/sites/default/files/documents/ALGAODelivery of Public Benefit and SocialValueGuidance.pdf](https://www.algao.org.uk/sites/default/files/documents/ALGAODelivery%20of%20Public%20Benefit%20and%20Social%20Value%20Guidance.pdf)

- 4.2.2 The level of public outreach should be commensurate with the significance of the results of the archaeological works. Activities may take the form of temporary interpretation boards, site open days and tours, exhibitions, social media posts, press releases, and presentations. Depending on the nature of the activities, they may be undertaken during the construction works or, if more appropriate, during the post-excavation stage. Details of any further public benefit and social value measures will be agreed in advance in writing with the client and CECAS.

4.3 Reporting

- 4.3.1 Within six weeks of the completion of all fieldwork the results of the archaeological works will be presented in the form of a written report. This report will synthesis the results of the fieldwork and determine the significance and extent of any archaeological features identified.

- 4.3.2 No further on-site works will commence until the completed Data Structure Report has been assessed by CECAS and recommendations for further mitigation made as required. Further Stage 2 mitigation measures will be secured by the development as per approved addenda to the WSI.
- 4.3.3 The report will synthesis the results of the archaeological works and advise on the significance and extent of any archaeological features identified. It will be prepared in accordance with current standard Historic Environment Scotland procedural requirements and AOC Archaeology standard procedures (Appendix 8), and will contain the following:
- i) a full descriptive text detailing the features identified and an interpretation of their date and purpose;
 - ii) plans and sections at an appropriate scale showing evaluation areas and features located;
 - iii) appropriate lists and diagrams summarising the contexts and artefacts recovered, and the records made of them;
 - iv) analysis of the results of the works, including appropriate post-excavation appraisals.
- 4.3.4 The results will also be reported using the OASIS digital reporting protocols. This will also allow for a summary report on the works and its findings to be submitted to Discovery and Excavation in Scotland.
- 4.3.5 Following approval of the report by the client and CECAS on behalf of City of Edinburgh Council,, a digital copy (PDF format) of the report will be supplied to the Historic Environment Record (HER) along with a selection of digital photos, plans and shapefiles. The shapefile information submitted (as part of the DSR) should be in accordance with the standard for spatial data as set out by the HER Forum Scotland.

4.4 Archive Deposition

- 4.4.1 Should Museum deposition of the physical archive be required this will be undertaken in line with the Before the Museums project, with work undertaken to the standards and requirements of the receiving museum, with the payment of the fees necessary as part of the archiving process.

Guidance on the Transfer of Archaeological Assemblages to Museums in Scotland from Commercial/ Developer-Funded Projects 2025 Algae Scotland.

https://algae.org.uk/sites/algae.org.uk/files/202507/SCA24_Guidance_Transfer_Archaeo_Assemblages_Scotland_DeveloperFunded2025.pdf

Minimum Standards for the Preparation of Archaeological Assemblages in Scotland 2025 Algao Scotland

[https://algao.org.uk/sites/algao.org.uk/files/202507/SCA24_Minimum Standards Archaeological Assemblages Scotland 2025.pdf](https://algao.org.uk/sites/algao.org.uk/files/202507/SCA24_Minimum%20Standards%20Archaeological%20Assemblages%20Scotland%202025.pdf)

- 4.4.2 The catalogued archive from these works will be prepared for deposition in Historic Environment Scotland within six months of the completion of all fieldwork.
- 4.4.3 Finds of objects will be subject to the Scots Laws of Treasure Trove and Bona Vacantia and reported by the archaeological contractor to the Secretariat of the Treasure Trove Panel for disposal to an appropriate museum. This process is a standard AOC procedure. The disposal of small finds will be conducted in accordance with Scottish legal requirements and according to the standard procedure, Appendix 7.26 - 7.29.

5 OPERATIONAL FACTORS

5.1 Monitoring

- 5.1.1 AOC Archaeology Group will liaise with CECAS at all times to ensure they are aware of fieldwork dates and can schedule monitoring visits. A mobile phone will be present on site at all times and CECAS will be informed of progress and initial results on a weekly basis.

5.2 Health & Safety

- 5.2.1 AOC Archaeology has always maintained high standards on-site and a copy of our Health & Safety policy can be supplied on request. The Site Lead will prepare appropriate documentation, including a Risk Assessment, for inclusion in the site's Health & Safety Plan.

5.3 Project Team

- 5.3.1 [REDACTED], Project Manager, will manage the project with quality assurance provided by [REDACTED], H&S Director and Fieldwork Sector Manager. An experienced field archaeologist shall undertake the works in the field.
- 5.3.2 Any resultant post-excavation analyses or conservation would be conducted by AOC Archaeology's in-house specialists and supervised by [REDACTED], Director and Post-Excavation Sector Manager, and [REDACTED], Conservation Sector Manager.
- 5.3.3 AOC Archaeology has all the facilities necessary to undertake all resultant works, including fully equipped conservation and palaeoenvironmental laboratories, secure storage and walk-in refrigeration units.

5.4 Conditions and Clarifications

- 5.4.1 Where previous works have identified the presence of contaminated ground, AOC Archaeology Group must be notified of the nature and extent of the contamination and be given guidance to the appropriate Health and Safety precautions required. Where these precautions comprise more than the use of thin over-suits and nitrate gloves AOC Archaeology Group will provide the necessary equipment for an additional cost.
- 5.4.2 AOC Archaeology reserves the right to discuss the archaeological works directly with CECAS where appropriate but will inform the client of this in advance.

6 REFERENCES

6.1 Bibliographic references

ALGAO Scotland, 2023. *Delivery of Public Benefit and Social Value for Archaeology in the Planning Process v1-3*. Available at: https://www.algao.org.uk/sites/algao.org.uk/files/2023-02/ALGAO_Delivery_of_Public_Benefit_Social_Value_Guidance.pdf Accessed 2nd April 2026

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6.2 Cartographic references

Roy's Military Survey of Scotland (Lowlands), 1752-1757.

First Edition Ordnance Survey 6-Inch. Edinburghshire 6. Surveyed: 1877. Published: 1890.

Second Edition Ordnance Survey 6-Inch. Edinburghshire VII.NW. Surveyed: 1892. Published: 1895.

APPENDIX 1

Test pits

- 1.1 Spacing and size of test pits will vary according to local topography, geology, and known or potential archaeology. Spacing and size will be as specified in the Written Scheme of Investigation.
- 1.2 Test pits will be laid out in relation to the Ordnance Survey national grid.
- 1.3 The most appropriate tools will be used taking into account the prevailing conditions at the time of the work.
- 1.4 A specified volume of topsoil from each test pit will be sieved through a 10mm mesh.
- 1.5 Conditions, contexts and artefact totals will be recorded on pro-forma sheets.
- 1.6 Subdivisions within the excavated material will be based on soil stratigraphy and spits of 100mm within each stratigraphical unit.
- 1.7 All artefact totals will be recorded by class.
- 1.8 Finds will be washed and sorted into groups in order to facilitate identification. Finds will be bagged according to artefact class within each collection unit.
- 1.9 Finds will be identified, quantified and recorded directly onto computer where appropriate. The results will be plotted using a CAD graphics programme when appropriate.
- 1.10 All significant artefact distributions will be plotted by field, group of fields or appropriate length for a linear scheme at 1:2500, with separate plans for each period or relevant subdivision, indicating the numbers of artefacts per test pit.
- 1.11 The pottery and other relevant artefacts will be scanned to assess the date range of the assemblage.
- 1.12 All finds and samples will be treated in a proper manner and to standards agreed in advance with the recipient museum or other body. These will be cleaned, conserved, bagged and boxed in accordance with the guidelines set out in UKIC's "*Conservation Guidelines No 2*".

APPENDIX 2

Machine excavated trenches

Excavation

- 2.1 The entire site will be visually inspected before the commencement of any machine excavation. This will include the examination of any available exposures (eg recently cut ditches and geo-technical test pits).
- 2.2 Normally trench positions will be accurately surveyed prior to excavation and related to the National Grid. It may be necessary to survey the positions after excavation in some instances.
- 2.3 All machining will be carried out by plant of an appropriate size. Normally, this will be a JCB 3CX (or similar) or 360⁰ tracked excavator with a 1.4 or 1.8m wide toothless bucket. Where access or working space is restricted a mini excavator such as a Kubota KH 90 will be used.
- 2.4 All machining will be carried out under direct control of an experienced archaeologist.
- 2.5 Undifferentiated topsoil or overburden of recent origin will be removed in successive level spits (approximately <0.5m) down to the first significant archaeological horizon.
- 2.6 Excavated material will be examined in order to retrieve artefacts to assist in the analysis of the spatial distribution of artefacts.
- 2.7 On completion of machine excavation, all faces of the trench that require examination or recording will be cleaned using appropriate hand tools.

- 2.8 All investigation of archaeological horizons will be by hand, with cleaning, inspection, and recording both in plan and section.
- 2.9 Within each significant archaeological horizon a minimum number of features required to meet the aims of the project will be hand excavated. Pits and postholes normally will be sampled by half-sectioning although some features may require complete excavation. Linear features will be sectioned as appropriate. Features not suited to excavation within the confines of narrow trenches will not be sampled. No deposits will be entirely removed unless this is unavoidable. As the objective is to define remains it will not necessarily be the intention to fully excavated all trenches to natural stratigraphy. However, the full depth of archaeological deposits across the entire site will be assessed. Even in the case where no remains have been located the stratigraphy of all evaluation trenches will be recorded.
- 2.10 Any excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features or deposits which appear to be demonstrably worthy of preservation *in situ*.
- 2.11 For palaeoenvironmental research different sampling strategies will be employed according to established research targets and the perceived importance of the strata under investigation. AOC Archaeology conventionally recovers three main categories of sample;
- i) Standard Bulk Samples; a representative 20 litre sample from every excavated soil context on site. This sample is used, through floatation sieving, to recover a sub-sample of charred macroplant material, faunal remains and artefacts;
 - ii) Purposive or Special Samples; a sample from a sediment which is determined, in field, to either have the potential for dating (wood charcoal for radiocarbon dating or *in situ* hearths for magnetic susceptibility dating) or for the recovery of enhanced palaeoenvironmental information (waterlogged sediments, peat columns, etc).
- 2.12 Any finds of human remains will be left *in situ*, covered and protected. In Scotland the local police will be informed. If removal is essential this will only take place with police approval, and in compliance with Historic Scotland's Operational Policy Paper '*The Treatment of Human Remains in Archaeology*'.
- 2.13 All finds of gold and silver will be moved to a safe place. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the artefacts from theft or damage. In Scotland the recovery of such material, along with all other finds, will be reported to the Queen's and Lord Treasurer's Remembrancer.
- 2.14 After recording, the trenches will be backfilled with excavated material.
- Recording*
- 2.15 For each trench, a block of numbers in a continuous sequence will be allocated.
- 2.16 Written descriptions, comprising both factual data and interpretative elements, will be recorded on standardised sheets.
- 2.17 Where stratified deposits are encountered a 'Harris'-type matrix will be compiled during the course of the excavation.
- 2.18 The site grid will be accurately tied into the National Grid and located on the 1:2500 or 1:1250 map of the area.
- 2.19 Plans will normally be drawn at a scale of 1:100, but on urban or deeply stratified sites a scale of 1:50 or 1:20 will be used. Burials will be drawn at 1:10. Other detailed plans will be drawn at an appropriate scale.
- 2.20 Long sections of trenches showing layers and any cut features will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20.
- 2.21 Generally all sections will be accurately related to Ordnance Datum. There may, occasionally, be instances where this is unnecessary when it will be agreed with the local authority's archaeological representative in advance.
- 2.22 Registers of sections and plans will be kept.
- 2.23 A full colour print and colour transparency photographic record will be maintained. This will illustrate the principal features and finds both in detail and in a general context. The photographic record will also include working shots to represent more generally the nature of the fieldwork.
- 2.24 A register of all photographs taken will be kept on standardised forms.
- 2.25 All recording will be in accordance with the standards and requirements of the *Archaeological Field Manual* (Museum of London Archaeology Service 3rd edition 1994).

Finds

- 2.26 All identified finds and artefacts will be collected and retained. Certain classes of material, ie post-medieval pottery and building material, may on occasion be discarded after recording if a representative sample is kept. No finds will be discarded without the prior approval of the archaeological representative of the local authority and the receiving museum.
- 2.27 Finds will be scanned to assess the date range of the assemblage with particular reference to pottery. In addition the artefacts will be used to characterise the site, and to establish the potential for all categories of finds should further archaeological work be necessary.
- 2.28 All finds and samples will be treated in a proper manner and to standards agreed in advance with the recipient museum. Finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in United Kingdom Institute for Conservation's *Conservation Guidelines No. 2*.
- 2.29 All archaeological material recovered belongs to the Crown and its disposal is administered by the Queen's and Lord Treasurer's Remembrancer.

APPENDIX 3

Evaluation reports

- 3.1 The style and format of the evaluation report will be determined by AOC Archaeology, but will be compliant with Historic Scotland's issued guidance on Data Structure Reports. The report will include as a minimum the following;
- i) A location plan of the site.
 - ii) A location plan of the trenches and/or other type of fieldwork strategy employed.
 - iii) Plans and sections of features and/or extent of archaeology located. These will be at an appropriate scale.
 - iv) A summary statement of the results.
 - v) A table summarising per trench the deposits, features, classes and numbers of artefacts encountered and spot dating of significant finds.
 - vi) Consideration to the methodology will be given along with a confidence rating for the results.
- 3.2 When an evaluation is followed by an excavation the procedures defined in English Heritage's *Management of Archaeological Projects* 2nd edition 1991 will be followed for immediate post-field archive preparation and initial assessment. It will then be agreed with the local authority's archaeological advisor which aspects will need to be taken forward to the report stage.

APPENDIX 4

Area excavation

- 4.1 Prior to the stripping of any area excavation, all appropriate surveys (eg geophysical, earthwork, contour) or sampling strategies (eg for topsoil artefact densities, metal detecting, phosphate analysis) will be undertaken.
- 4.2 In most cases sites will be mechanically stripped of topsoil and other overburden. An appropriate machine will always be used. This will normally be a 360° tracked excavator with a between 1.4 and 2.4m wide toothless bucket. In other cases a JCB 3CX (or similar), or for work with restricted access or working room a mini-excavator such as a Kubota KH 90 will be used. Suitably sized dumpers or lorries will be employed to remove spoil. No plant will be allowed to cross stripped areas.
- 4.3 All machining will be undertaken under the direct control of experienced archaeologists.
- 4.4 All undifferentiated topsoil or overburden will be removed down to the first significant archaeological horizon in level spits. The archaeological horizon to which the material will be cleared will have first been established by an evaluation or by the digging of test pits.

- 4.5 Depending on the aims of the project, the excavated spoil may be monitored in order to recover artefacts. Where their findspots are plotted this will usually be on a 2m grid.
- 4.6 The surface exposed by the stripping will be cleaned using appropriate hand tools.
- 4.7 Should the site grid not have already been established it will be done at the cleaning stage. The grid will normally be based on a 10m spacing and related to the National Grid. A temporary bench mark related to Ordnance Datum will be founded
- 4.8 After the cleaning and planning of the excavation area the sampling strategy will be finalised. This will take into account the project aims (which may need modifying at this stage) and the type, quality and quantity of remains revealed. The sampling strategy will normally seek to maintain at least the following levels;
- i) all structures and all zones of specialised activity (eg funerary, ceremonial, industrial, agricultural processing) will be fully excavated and all relationships recorded;
 - ii) ditches and gullies will have all relationships defined, investigated and recorded. All terminals will be excavated. Sufficient lengths of the feature will be excavated to determine the character of the feature over its entire course; the possibility of re-cuts of parts of the feature, and not the whole, will be considered. This will be achieved by a minimum 10% sample of each feature (usually a 1m section every 10m).
 - iii) Sufficient artefact assemblages will be recovered (where possible) to assist in dating the stratigraphic sequence and for obtaining ample ceramic groups for comparison with other sites;
 - iv) all pits, as a minimum, will be half-sectioned. Usually at least 50% (by number) of the pits will be fully excavated. Decisions as to which pits will be fully excavated will be taken in the light of information gained in the half-sectioning taking into consideration, amongst other things; pit function, artefact content and location;
 - v) for post and stake holes where they are clearly not forming part of a structure (see above) 100% (by number) will be half-sectioned ensuring that all relationships are investigated. Where deemed necessary, by artefact content, a number may demand full excavation;
 - vi) for other types of feature such as working hollows, quarry pits, etc the basic requirement will be that all relationships are ascertained. Further investigation will be a matter of on-site judgement, but will seek to establish as a minimum their extent, date and function;
 - vii) for layers, an on-site decision will be made as to the limits of their excavation. The factors governing the judgement will include the possibility that they mask earlier remains, the need to understand function and depositional processes, and the necessity to recover sufficient artefacts to date the deposit and to meet the project aims.
- 4.9 For palaeoenvironmental research different sampling strategies will be employed according to established research targets and the perceived importance of the strata under investigation. AOC Archaeology conventionally recovers three main categories of sample;
- i) Standard Bulk Samples; a representative 20 litre sample from every excavated soil context on site. This sample is used, through floatation sieving, to recover a sub-sample of charred macroplant material, faunal remains and artefacts;
 - ii) Purposive or Special Samples; a sample from a sediment which is determined, in field, to either have the potential for dating (wood charcoal for radiocarbon dating or *in situ* hearths for magnetic susceptibility dating) or for the recovery of enhanced palaeoenvironmental information (waterlogged sediments, peat columns, etc).
- 4.10 Any finds of human remains will be left *in situ*, covered and protected. In Scotland the local police will be informed. If removal is essential this will only take place with police approval, and in compliance with Historic Scotland's Operational Policy Paper '*The Treatment of Human Remains in Archaeology*'.
- 4.11 All finds of gold and silver will be moved to a safe place. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the artefacts from theft or damage. In Scotland the recovery of such material, along with all other finds, will be reported to the Queen's and Lord Treasurer's Remembrancer.

Recording

- 4.12 All on-site recording will be undertaken in accordance with the standards and requirements of the *Archaeological Site Manual* (Museum of London 1994).
- 4.13 A continuous unique numbering system will be employed.
- 4.14 Written descriptions, comprising both factual data and interpretative elements, will be recorded on standardised sheets.
- 4.15 Where stratified deposits are encountered a 'Harris'-type matrix will be compiled during the course of the excavation.
- 4.16 The site grid will be accurately tied into the National Grid and located on the 1:2500 or 1:1250 map of the area.
- 4.17 Plans will normally be drawn at a scale of 1:100, but on urban or deeply stratified sites a scale of 1:50 or 1:20 will be used. Burials will be drawn at 1:10. Other detailed plans will be drawn at an appropriate scale.
- 4.18 Long sections of trench edges or internal baulks showing layers and any cut features will be drawn at 1:50 or 1:20 depending on amount of detail contained. Sections of features will be drawn at 1:20.
- 4.19 All sections will be accurately related to Ordnance Datum.
- 4.20 Registers of sections and plans will be kept.
- 4.21 A full colour print and colour transparency photographic record will be maintained. This will illustrate the principal features and finds both in detail and in a general context. The photographic record will also include working shots to represent more generally the nature of the fieldwork.
- 4.22 A register of all photographs taken will be kept on standardised forms.

Finds

- 4.23 All identified finds and artefacts will be collected and retained. Certain classes of material, ie post-medieval pottery and building material may on occasion be discarded after recording if a representative sample is kept. No finds will be discarded without the prior approval of HES Collections.
- 4.24 All finds and samples will be treated in a proper manner and to standards agreed in advance with the recipient museum. Finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in United Kingdom Institute for Conservation's *Conservation Guidelines No. 2*.
- 4.25 All archaeological material recovered belongs to the Crown and its disposal is administered by the Queen's and Lord Treasurer's Remembrancer.

Archiving, post-excavation and publication

- 4.26 Following completion of each stage or the full extent of the fieldwork (as appropriate) the site archive will be prepared in the format agreed with the receiving institution.
- 4.27 On completion of the archive a summary report will be prepared. This will include;
- i) an illustrated summary of the results to-date indicating to what extent the project aims were fulfilled;
 - ii) a summary of the quantities and potential for analysis of the information recovered for each category of site, artefact, dating and palaeoenvironmental data;
 - iii) proposals for analysis and publication.
- 4.28 The proposals for analysis and publication will include;
- i) a list of the revised project aims arising from the fieldwork and post-excavation assessment;
 - ii) a method statement which will make clear how the methods advocated are those best suited to ensuring that the data-collection will fulfil the stated aims of the project;
 - iii) a list of all tasks involved in meeting the stated methods to achieve the aims and produce a report and research archive in the stated format;
 - iv) details of the research team and their projected work programmes in relation to the tasks. Allowance will be made for general project-related tasks such as project meetings, management, editorial and revision time;
 - iv) a publication synopsis indicating publisher, report format and content shown by chapters, section and subheadings with the anticipated length of text sections and proposed number of illustrations.

- 4.29 The summary report embracing the analysis and publication proposals will be submitted to the client and the local authority's archaeological representative for approval.
- 4.30 Any significant variation in the project design, including timetables, proposed after the agreement of the proposals must be acceptable to the local authority's archaeological representative.
- 4.31 The results of the project will be published in an appropriate archaeological journal or monograph. The suitable level of publication will be dependent on the significance of the project results, but as a minimum the basic requirements of Appendix 7.1 of *Management of Archaeological Projects* (English Heritage 1991) will be met.

APPENDIX 5

Watching Briefs

- 5.1 Where the archaeologist (Watching Brief Officer) has no remit over the working methodology of the site (specification of machine or depth of excavation). The Watching Brief Officer will simply observe the works and record their nature and form. Where the Watching Brief Officer specifies the site methodology, ie type of machine and depth of excavation. AOC Archaeology's preferred approach is to consider the Watching Brief Area as a large evaluation trench and follows in general, Appendix 7.
- 5.2 It is important to stress that the client determines the area affected and unless instructed by a curator the Watching Brief Officer has no power to extend the area unless it is to fully excavate a human body that otherwise would have been truncated by the works.
- 5.3 In addition to the general principles outlines in Appendix 7 the following approaches will be undertaken:
- 5.4
- i) a record will be made of all site attendances;
 - ii) in general a written and photographic record will be kept of the excavated sediments;
 - iii) where archaeological features are identified and they can be dealt with in less than two hours this work will be undertaken by the Watching Brief Officer. Recording and excavation protocols will follow Appendices 7.9 –7.11;
 - iv) where archaeological remains requiring more than two hours of excavation and recording, the Watching Brief Officer will stop the works and both the curator and the client will be contacted to devise a mitigation strategy. All delays will be kept to a minimum. Any resultant excavation and recording work will be in keeping with the methods outlined in Appendix 9;
 - v) the extent of the watching brief area will not be recorded unless specifically required by either the client or the curator. Where such recording is required the area will be accurately recorded by total station and linked into the Ordnance Datum;
 - vi) Reporting of Watching Briefs will follow methods specified in AOC's standard operating procedures.

APPENDIX 6

General

- 6.1 The requirements of the Brief will be met in full where reasonably practicable.
- 6.2 Any significant variations to the proposed methodology will be discussed and agreed with the local authority's archaeological representative in advance of implementation.
- 6.3 The scope of fieldwork detailed in the main part of the Written Scheme of Investigation is aimed at meeting the aims of the project in a cost-effective manner. AOC Archaeology Group attempts to foresee all possible site-specific problems and make allowances for these. However there may on

occasions be unusual circumstances which have not been included in the programme and costing. These can include;

- i) unavoidable delays due to extreme weather, vandalism, etc;
- ii) trenches requiring shoring or stepping, ground contamination, unknown services, poor ground conditions;
- iii) extensions to specified trenches or feature excavation sample sizes requested by the local authority's archaeological advisor;
- iv) complex structures or objects, including those in waterlogged conditions, requiring specialist removal.

Health and Safety

6.4 All relevant health and safety legislation, regulations and codes of practice will be respected.

6.5 With the introduction of the Construction, Design and Management Regulations 1994, AOC Archaeology works with Clients, Main Contractors, and Planning Supervisors to create a Health and Safety Plan. Where CDM regulations apply, each project will have its own unique plan.

Insurances

6.6 AOC Archaeology holds Employers Liability Insurance, Public Liability Insurance and Professional Indemnity Insurance. Details can be supplied on request.

6.7 AOC Archaeology will not be liable to indemnify the client against any compensation or damages for or with respect to;

- i) damage to crops being on the Area or Areas of Work (save in so far as possession has not been given to the Archaeological Contractor);
- ii) the use or occupation of land (which has been provided by the Client) by the Project or for the purposes of completing the Project (including consequent loss of crops) or interference whether temporary or permanent with any right of way light air or other easement or quasi easement which are the unavoidable result of the Project in accordance with the Agreement;
- iii) any other damage which is the unavoidable result of the Project in accordance with the Agreement;
- iv) injuries or damage to persons or property resulting from any act or neglect or breach of statutory duty done or committed by the client or his agents servants or their contractors (not being employed by AOC Archaeology) or for or in respect of any claims demands proceedings damages costs charges and expenses in respect thereof or in relation thereto.

6.8 Where excavation has taken place evaluation trenches will be backfilled with excavated material but will otherwise not be reinstated unless other arrangements have previously been agreed. Open area excavations normally will not be backfilled but left in a secure manner unless otherwise agreed.

Copyright and confidentiality

6.9 The immediate products of research and fieldwork will be the property of the Crown, as set out in detail in HES's standard terms and conditions for a contract. Copyright of all products of work executed in accordance with any commission based on this Project Outline shall be the property of and vest in the Crown. However, such products may be used for non-commercial purposes, such as academic articles and lectures, without further permission or fee.

6.11 AOC Archaeology will advise the Client of any such materials supplied in the course of projects which are not AOC Archaeology's copyright.

6.12 AOC Archaeology undertake to respect all requirements for confidentiality about the Client's proposals provided that these are clearly stated. In addition AOC Archaeology further undertakes to keep confidential any conclusions about the likely implications of such proposals for the historic

environment. It is expected that Clients respect AOC Archaeology's and the Institute of Field Archaeologists' general ethical obligations not to suppress significant archaeological data for an unreasonable period.

Standards

- 6.13 AOC Archaeology conforms to the standards of professional conduct outlined in the Institute of Field Archaeologists' Code of Conduct, the IFA Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology, the IFA Standards and Guidance for Desk Based Assessments, Field Evaluations etc., and the British Archaeologists and Developers Liaison Group Code of Practice.
- 6.14 Project Directors normally will be recognised in an appropriate Area of Competence by the Institute of Field Archaeologists.
- 6.15 Where practicable AOC Archaeology will liaise with local archaeological bodies (both professional and amateur) in order that information about particular sites is disseminated both ways (subject to client confidentiality).

APPENDIX 7

Specialist staff

The following specialist staff may be used on this project depending on the type of artefacts and soil samples recovered during the course of the fieldwork. External specialists will be used where appropriate

AOC Archaeology Staff:

	Dendrochronology, charcoal and timber analysis
	Pollen analysis
	Lithics & coarse stone
	Human bone
	Charcoal identification
	Soils and sediments analysis
	Metal working and industrial residues
	Ecofacts, animal bone and shell
	Prehistoric and medieval finds and pottery
	Clay Tobacco Pipes

APPENDIX 8

Post-excavation

8.1 *Sample Flotation*

Sample flotation is a water recovery technique designed to separate organic remains from the soil matrix. A Siraf style system of flotation and wet-sieving will be operated by the archaeological contractor. This system comprises an enclosed area of water into which the soil samples are deposited and agitated. Due to the difference in densities of organic and inorganic remains the light fractions will float, the heavy fractions will sink and the silt fraction will be washed away. The resulting floating material (flot) is collected in sieves of 0.3mm and 1mm, the non-floating residue (retent) is wet-sieved through a 1 mm mesh.

All flots and retents are air dried, bagged and labelled accordingly. Throughout this process all equipment is kept clean to prevent contamination of the samples. For each sample, a Sieving Assessment sheet is completed. This gives basic information about the sample, retent and flot. Prior to flotation and wet-sieving, the volume of each sample is measured by means of a graduated bucket.

If in a sample a high concentration of clay can be observed and therefore separation of the different fractions of the soil is difficult, an aqueous solution of defloculant 'Calgon' is added and the sample is left to soak overnight, before processing by flotation and wet-sieving.

Sample flotation will be carried out on site and/or at the premises of the archaeological contractor.

8.2 *Sample Wet sieving*

Sample wet sieving, also a water recovery technique, is carried out in laboratory conditions and is designed to recover waterlogged material. For the recovery of waterlogged botanical material, small soil samples (0.5 to 1.0 litre) are processed through a 0.3 mm sieve. The sediment is placed in a bucket with water and agitated before being washed through the 0.3 mm sieve. This process is repeated until the sample is totally disaggregated. The resulting material is stored in water or ethanol depending on the length of the storage period. Sample wet sieving can also be used to recover larger waterlogged material such as leather and wood in which case larger volumes of soil are processed.

8.3 *Sample Dry sieving*

Sample dry sieving is carried out to retrieve smaller artefacts that might be missed during normal excavation procedure, eg. small sherds of pottery and bone. Done in laboratory conditions, all samples are air dried in the first instance. Done in the field, the samples are processed with the sample in a field-moist state. In both cases the sample is passed through a 4 mm mesh and any items of interest are recovered and recorded.

8.4 *Residue sorting*

All residue (retent) sorting is carried out in laboratory conditions, and is designed to recover not only material that might be missed during normal excavation procedure (see dry sample sieving), but also material that would be impossible to recover during normal excavation procedure eg. charred and uncharred plant remains, insect remains and small fragments of charcoal.

The volume of the residue is recorded and then passed through a set of sieves (mesh sizes 8 mm, 4 mm, 2 mm and 1 mm). Each fraction is spread out onto a separate tray, is scanned with the naked eye and all items of interest are recovered. Under normal circumstances all identifiable material from all fractions is recovered. The only exception to this is burnt wood (charcoal) which is only retrieved from the > 4 mm fractions. All material recovered is bagged individually by material type and the material types and weights recorded on the Retent Sorting Sheet. Also recorded on this sheet are the project number, context number, area, sample number, the sorters initials, date, sample volume, retent volume and percent of the retent sorted. Under normal circumstances 100 % of all fractions are sorted. In those instances where this is not the case, this will be recorded. Where no material is recovered from a retent, the Retent Sorting Sheet will be filled out as usual, with the word sterile written across it.

8.5 *Flot sorting*

All flot sorting is carried out in laboratory conditions. The volume of each flot is measured. The flots are sorted by means of a low powered binocular microscope. The macro plant remains and other archaeological or ecological material are extracted from the flots and put into gelatine capsules or glass tubes. An estimate of the number of items recovered and the species represented are recorded. The charcoal larger than 4mm is extracted from the flots and weighed. All extracted items are bagged and labelled accordingly.

8.6 *Routine Soils Analysis*

All the samples taken on-site will have a routine partner. Four standard routine soil tests will be carried out by the archaeological contractor. These are pH analysis, Loss on Ignition, Calcium Carbonate content and Easily available phosphate content.

The pH value is the measure of the acidity (H⁺) or alkalinity (OH⁻) of the sample. Dissolving a portion of the soil in distilled water, then measuring the sample using pH meter carries this out. This is to allow us to estimate the potential for preservation within the sediment.

Loss on Ignition is the measure organic content of the sample. This is measured by burning a small amount of the sediment in a furnace at 400°C for four hours. By measuring the weight before and after burning the organic content can be calculated. The organic content allows us to examine whether manuring or treatment of the natural soil has taken place.

Calcium Carbonate content can be measured by dissolving a few grains of the sample using Hydrochloric acid. If calcium carbonate is present then a small amount of Carbon Dioxide is given off, the greater the amount of CO₂ released the greater the amount of CaCO₂. The Calcium Carbonate content shows us if there is any natural calcium carbonate within the sediment, or if not, any mortar or shell has been included artificially.

The amount of phosphate within a sample is examined at the same time as CaCO₂. After the CO₂ has been released Ascorbic acid is applied, if Phosphate is present a colour change will occur. The phosphate content may show the presence of animals or to a lesser degree indicate where animals were kept.

8.7 *Soil Micromorphological Analysis*

Micromorphology is the study of undisturbed soils and loose sediments and other materials at a microscopic scale. A 25-30 micron thick slice of soil or sediment is mounted on glass and studied using a petrographic microscope. The samples are prepared for thin section analyses at the Department of Environmental Science, University of Stirling using the methods outlined by Murphy (1986). The samples are analysed using the descriptive terminology of Bullock *et al* (1985) and FitzPatrick (1993).

Bullock, P., Fedoroff, N., Jongerius, A., Stoops, G., Tursina, T. & Babel, U. 1985 *Handbook for soil thin section description*. Wolverhampton: Waine research Publications.

FitzPatrick, E.A. 1993. *Soil microscopy and micromorphology*. Chichester: John Wiley & Sons.

Murphy, C. P. 1986. *Thin section preparation of soils and sediments*. Berkhamsted: AB Academic Press.

8.8 *Charcoal ID*

Only charcoal retrieved from the 4mm sieve (see Sieving and Sorting procedures) is used for species identification, mainly because fragments below that threshold are too small to identify. If there is no charcoal larger than 4mm present then attempts will be made to identify the largest fragments present for the purpose of C14 samples.

Surfaces are prepared for identification by using a surgical blade to prise off flakes of charcoal revealing fresh surfaces on which diagnostic features can be identified. The charcoal fragment is bedded in sand for examination under a reflected-light microscope.

On average, up to 10 fragments of charcoal are identified per bulk sample. If a single species is present then identification can stop at 5 fragments. However, if a great variety of species is present, ie more than four, then identification should continue until the analyst is happy that a representative sample has been examined. Unusual or exotic species should be bagged and labelled separately within the bulk sample.

Other variables, such as whether the fragment is young roundwood, with sub-bark surfaces intact, whether it has come from a large piece of wood and whether it is fast or slow grown, should be noted. Species identification is undertaken with reference to Schweingruber's (1982)

8.9 *Wood ID*

Waterlogged wood; Surfaces on waterlogged wood are prepared for identification by using a cut-throat razor or a double-sided razor blade to pare off thin-sections which are cell-thick and transparent so that diagnostic features can be identified. It is consequently difficult to identify fragments of waterlogged wood smaller than 10 mm². The thin-sections are temporarily mounted in water on slides for examination under a transmitted-light microscope.

Sampling for identification is carried out on the same basis as that for charcoal. Species identification is undertaken with reference to Schweingruber's (1982) *Microscopic Wood Anatomy* and the in-house reference collection of the archaeological contractor.

8.10 *Non-charcoal charred plant macrofossil analysis and Waterlogged plant analysis*

Analysis of the charred plant macrofossils and waterlogged plants involves identification, quantification and interpretation. Identification of the macro plant remains is done using a low power binocular microscope with x10 and x40 magnifications. The modern reference collection of the archaeological contractor and various seed atlases (Beijerinck 1947, Berggren 1969 & 1981 and Anderberg 1994) will be used to ease identification. The botanical nomenclature follows Flora Europaea (Tutin *et al* 1964-1981). A standardised counting method is used for quantification. Habitat information for the plant species will be taken from Hanf (1983).

8.11 *Dendrochronological analysis*

Sample size and species type; Three conditions are necessary to ensure the successful dating of a building or archaeological site. The timber must be a species for which there are already dated chronologies which in the UK usually means oak. Cross-matching is a statistical process, and therefore a number of timbers are required, usually at least 8 per building or phase. Finally, and for the same reasons the ring-patterns must be over a certain length, usually 70 rings. With these conditions observed it can be relatively straightforward to obtain a date for a building.

On-site sampling; *In situ* timbers in a standing building are usually sampled using a corer, which is attached to a power-driven drill and removes a core leaving a hole in the timber 10 mm in diameter. The core must be taken so that the maximum radius from pith to bark is sampled, thus ensuring the maximum number of growth-rings for analysis. It is also important to select those timbers which have retained as full a ring sequence as possible, ie those where the outermost rings have not been trimmed off or destroyed by woodworm.

Coring is an intrusive method of sampling and it is occasionally impossible to use this method, as in the case of painting ceilings and carved panels. If the end-grain is exposed the ring sequence can be measured *in situ* using a hand lens. Silicone rubber casts can also be taken.

If structural timbers have been removed during the renovation of a building then slices, approximately 50 mm thick can be sampled by saw, usually a chainsaw, from a point along the timber where the maximum radius survives.

Timbers only survive below ground in waterlogged conditions. Waterlogged timbers are sampled as above, by the removal of a 50 mm slice by sawing.

Sample preparation;

Cores are mounted in angle moulding and then the surface is prepared by paring with a Stanley knife followed

by fine sanding with Wet & Dry sandpaper until the ring-pattern is clear and measurable.

Slices (dry); The surface of the slice is sanded, usually with a power sander, using progressively finer sandpaper until the ring-pattern is clear and measurable. It is often necessary to finish off the surface with W&D sandpaper.

Slices (wet); The slice is usually frozen for 24 hours and then the surface is planed flat using a Surform plane. This often achieves the necessary clarity of ring-pattern but where the wood is particularly hard it will be necessary to use a razor blade to pare the surface to achieve a clear ring-pattern.

Silicone rubber casts; These are fixed to battens of wood using silicone rubber, for ease of measurement.

Measurement and analysis; The samples are measured on a custom-made measuring table and the data logged onto the computer using DENDRO (Tyers 2000). Data graphing and statistical analysis are also carried out using the same package.

APPENDIX 9

Conservation

9.1 *Conservation principles*

The principles, ethical codes and techniques of conservation are under constant review by both practitioners and professional bodies. The archaeological contractor's approach to conservation will reflect current theory and practice, as recommended by the United Kingdom Institute for Conservation, the Scottish Museums Council, Resources for Museums and Galleries, the International Council on Museums and the International Institute for Conservation.

9.2 *Security*

The archaeological contractor will take all reasonable precautions to ensure the security of items brought in for conservation. The building will be protected by intruder detector systems; all conservation items will be kept in a secure locked store when not being worked on, and will not be left unattended. Particularly valuable items will be stored in a safe where required. A heat and smoke detection system will also be in operation 24 hours a day.

9.3 *Insurance*

Artefacts for conservation will not be covered by the contents insurance of the archaeological contractor. Insurance cover can be arranged for individual items and collections, but this is expensive. Clients are normally advised that the cheapest option is to extend their own insurance for these items for a fixed period. If required, the archaeological contractor could arrange additional insurance, and these costs would be passed on.

The archaeological contractor will have full professional indemnity cover for all its staff.

9.4 *Health and safety*

All relevant Health and Safety legislation, Regulations, Guidelines and Codes of Practice will be respected; Health and Safety plans will be compiled where Construction, Design and Management Regulations 1994 apply.

9.5 *Conservators and allied specialist services*

Professionalism: The conservators of the archaeological contractor will be graduates of approved conservation courses, and will have a thorough knowledge of current conservation practices in their particular specialist fields. The conservators will have been actively encouraged to broaden their skills and experience, and to obtain professional accreditation through the United Kingdom Institute for Conservation or PACR.

9.6 *Specialist post-excavation analyses*

Other services which the archaeological contractor will be able to offer are:

wood identification and woodworking analysis
tree ring dating
pollen analysis
building materials analysis
metal artefacts
metalworking and glass working debris
materials analysis
textile analysis
insects
fish and shells
bird bones
plant remains
bone identification
soils specialist/geologist

artefact specialist
fibre identification
leather identification

9.7 *Documentation*

Conservation complements the work of other professionals by preventing the deterioration of the artefact, and by ensuring that the wider community benefits from the additional information recovered about an artefact in the course of conservation work.

Conservation reports are normally supplied as a hard copy, but can also be supplied on disc in a variety of formats, according to the client's requirements. Reports are normally printed on paper with a guaranteed life expectancy of 150 years; photographic materials are processed to professional industry standards such as Q-Lab.

9.8 *Archival considerations*

The archaeological contractor will endeavour to ensure that the materials used to document artefacts undergoing treatment have a reasonable life span. Paper used will have an estimated lifetime of 150 years (HMSO specification), and all photographic films will be processed to industry standards by a processing company that specialises in high quality work for professional photographers. Radiography films and chemicals will be fresh and well within their expiry dates. All labelling of boxes etc. will be carried out with archival quality inks; labels will generally be duplicated for safety's sake.

Wherever possible, the archaeological contractor will consider the archiving requirements for the site, and may consult the receiving museum or archive about their requirements; the archaeological contractor will follow guidelines proposed by the Association of Museum Archaeologists.

The archaeological contractor will abide by current guidelines on the care and disposal of artefacts and human remains, as set out in:

The Disposal and Allocation of Finds

Publication and Archiving of Archaeological Projects

Treatment of Human Remains in Archaeology

Archaeological Project Design, Implementation and Archiving

9.9 *Museum of London Guidelines*

Museum of London requirements for conservation, recording, documentation, packing and archiving will be applied where these are a pre-condition.

9.10 *Assessment and estimating*

The assessment determines the condition of the artefact and the best means to ensure its survival. Radiography (x-raying) of the object is normally carried out at an early stage, and is compulsory for iron objects, which have poor survival prospects, and for some copper alloy artefacts.

The estimate for the work normally applies for six months; it may be necessary to review it thereafter. Conservation rates are agreed by negotiation.

9.11 *Recording*

Text and image records (paper, digital and/or film as appropriate) will be made of all artefacts before conservation commences. Any information recovered during cleaning and conservation (eg associated material, residues, corrosion products, manufacturing techniques) will be carefully recorded, with samples taken where necessary. Soil removed from an artefact during the process will normally be retained and returned with the object, unless the excavator and/or client decides that it is not required. Where necessary, experts will be consulted on the nature of any material discovered during cleaning or conservation of artefacts. All samples and slides will become part of the site archive and remain with the artefact.

The conservation report will also include recommendations for the care and curation of the assemblage; special finds with particular packing requirements will have clear handling and lifting instructions on the outside of any packaging.

9.12 *Conservation Record*

The conservation assessment sets out the proposed treatments for each type of artefact or material: these treatments can be discussed with the client, and with the museum, to take into account any priorities and display requirements. (See Section 9, Assessment)

9.13 *Radiography*

The archaeological contractor will x-ray all excavated iron objects, as well as some of the copper alloy, and any other items as requested by the excavator: information from the x-rays are incorporated into the conservation report. All metal artefacts can be x-rayed if required; only film and chemicals within their expiry date are used, washing periods are the optimum to maximise film preservation.

X-rays normally become part of the archive, and are returned to the client, with full details of exposure time and voltages used.

9.14 *Record photography*

All artefacts selected for conservation will be photographed (on colour slide film) at least once; usually before and after conservation, with a label and scale in the frame. Unusual artefacts, noteworthy features or modified conservation treatments will be photographed whenever appropriate.

All images will be recorded in the conservation report, and each slide labelled with the context and find number. The archaeological contractor will use Professional grade film, and a professional developing service to ensure maximum film stability. The slides form part of the conservation archive, and will remain with the artefact.

9.15 *On-site conservation and conservation on call*

A conservator can be available on site if required, and the conservators of the archaeological contractor can provide immediate advice over the phone at any time (specific arrangements must be made for out of hours working).

Advice on packing, lifting and transporting artefacts may be given in the early stages of a project.

9.16 *Conservation treatments*

The requirements of each artefact will be considered individually, and any remedial treatments carried out will use only recognised conservation treatments and approved materials. The archaeological contractor will be committed to CPD, which ensures that its conservation staff are fully cognisant with new developments in the field.

9.17 *Post-excavation storage*

It is recognised that budgetary arrangements may mean considerable time can elapse between excavation and conservation or Finds Disposal. All finds will be examined by a conservator on receipt; packing and storage materials will be renewed as necessary, and the archaeological contractor will ensure that all finds will be kept in a secure, stable environment until conservation treatments begin. Any finds that require immediate treatment will undergo conservation as soon as the conservators have consulted the Project Field Officer. Large volume storage at 1° C and -20° C; and storage for waterlogged material will be available in-house.

9.18 *Packing*

All artefacts will be packed in suitable inert materials, with silica gel if required. Fragile objects will be supported by Ethafoam, or similar, and lifting and handling instructions on the container. Especial care will be taken for artefacts, which will be going into long term storage. All containers will be carefully labelled, and box lists supplied.

APPENDIX 10

Archiving and finds disposal

10.1 *Finds disposal*

All archaeological finds will be reported directly to the Treasure Trove Unit (TTU) on behalf of HES within 6 months of completion of excavation/intervention, unless an extension is agreed for the purposes of enabling further necessary post-excavation analysis. The relevant Regional Collections Manager (RCM)

will be kept informed and confirm once the finds have been reported. A completed copy of the HES Finds deposition form will be sent to the relevant RCM.

Once reported, the allocation of the finds will be considered by the Scottish Archaeological Finds Allocation Panel and their recommendation passed onto the Crown Office for a decision via the TTU.

AOC will be responsible for the safekeeping of all artefacts and ecofacts recovered during fieldwork from the moment of discovery until their delivery to a recipient museum/HES. If the finds are disclaimed by the TTU, AOC will arrange with the relevant RCM to return them to HES. AOC have the appropriate procedures and movement control paperwork in place to allow the effective tracking and recording of the location of all finds and ecofacts during all stages of post excavation analysis or study. AOC may be asked to produce copies of these throughout the contract.

Once an allocation decision has been made, the TTU will inform AOC in writing where the finds are to be delivered. AOC will keep the relevant RCM informed on details of the delivery. If the recipients are HES, AOC will arrange delivery to HES Edinburgh stores via the relevant RCM. Finds deliveries will be accompanied by copies of Data Structure Reports for the site, specialist reports, box lists and any other relevant information to allow the museum to catalogue the finds. A digital copy of this information will also accompany the finds.

10.2 *Archiving*

All archiving will be undertaken according to standards and guidelines set out by the National Monuments Record of Scotland (NMRS), located at the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS). The archives of all archaeological works will be deposited to the NMRS.

APPENDIX 11

Publications

11.1 *General*

All publications by AOC will be clear, correct and concise accounts of what was done and will reach standards acceptable to the archaeological profession. In addition, AOC may be asked to provide outreach elements or publication of any fieldwork or research as part of this contract. Outreach elements would normally range from the delivery of site tours, public engagement, talks, lectures and conference papers, but may include media work and social media updates. Publications may take the form of academic journal articles, monographs, or as reports on the HES website. If this has been requested, it should be itemised with the post-excavation costs or separately as appropriate.

Publications should be published in popular archaeological, general and specialist formats to inform a wide readership of what work was done and must be made available to both lay and professional audiences for the foreseeable future. Publications must also provide good value for money in terms of the content and style of the publications. In DES entries and journal publications the role of the client will be fully acknowledged. In the popular publications and monographs suggested below the role of the client will be more fully promoted, with the display of the client's logo on the cover and a foreword by their representative. The over-riding aim of the procedures outlined in this section is to ensure that, during the duration of the project, a continuous stream of information about the archaeological works is made available for peer review and public consumption. The following stages and publication vehicles are envisaged.

11.2 *DES entries*

After the completion of each piece of on-site work, whether it be a watching brief, evaluation, set-piece excavation or building recording exercise a Data Structure Report (DSR) will be produced (see Fieldwork procedures). These are not reports intended for publication but they usually include a short summary which will be submitted for publication in *Discovery and Excavation Scotland* (DES), an annual summary of fieldwork published by the Council for Scottish Archaeology. It is proposed that an individual entry for each piece of on-site work will not be submitted; rather a single entry summarising all the works carried out in any one year will be compiled by the Project Manager. The DES summary is a standard requirement of planning authority archaeologists and ensures that notice of ground-breaking works is disseminated throughout the archaeological community.

11.3 *Journal publications*

Reports on the results of excavations are normally published either as an article in an academic journal or as a monograph in an appropriate series, depending on the scale of the results. The results of the set-piece excavations will be published as journal articles with reference to other on-site works such as watching briefs and building recording, where appropriate. The publication of these articles will follow on timeously from the completion of post-excavation works.

11.4 *Monograph publications*

The results of all the on-site works will be drawn together in a single volume, a monograph designed primarily for academic consumption. This will be published within 5 years of the completion of on-site works.

11.5 *Popular publications*

The results of all the on-site works will also be drawn together in 'popular' publications that augment the academic publications in making the results available to a wider public. This is a method of providing 'community gain' to the local and national community in return for its consent, through the planning process, to alter or demolish elements of the archaeological heritage. Popular publications may include, as deemed appropriate by the client, Internet reports within the web site of the archaeological contractor, printed colour booklets, leaflets, on-site interpretative panels and exhibitions.

11.6 *Editorial procedures*

The archaeological contractor will apply their in-house editorial policy and procedures, through which any projects nominated for publication are normally submitted.

APPENDIX 12 Data Management Plan

1. Project

Site Code:	28889
Site Name:	Colinton Kirk Manse, Colinton, Edinburgh
Project Type:	FW Monitored Topsoil Strip
OASIS ID:	
Local authority:	City of Edinburgh Council
Data Repository:	the Archaeology Data Service (ADS)

2. Data Collection and Standards

Data Standards & Methods of Collection

Methods of collection will conform to AOC recording practices and relevant ClfA Standards and Guidance for Archaeological Excavation (ClfA 2014). Digital data acquisition standards are defined from *ADS Guides to Good Practice* (Niven 2021):

<https://archaeologydataservice.ac.uk/help-guidance/guides-to-good-practice/the-project-lifecycle/planning-for-the-creation-of-digital-data/>

Data collection will adhere to [FAIR Principles](#) and will be in line with ClfA *Dig Digital* Guidance:

https://www.archaeologists.net/sites/default/files/downloads/selection-toolkit/digdigital_full_guidance.pdf

The intended repository for digital data is the Archaeology Data Service (ADS)

The intended repository for physical site records is the designated repository of the local authority – Historic Environment Scotland.

Site Records

Records for this project will be:

- Created on pro-forma record cards and data entered into spreadsheets/scanned to PDF on completion of fieldwork.

Photographic Record

The photographic record will comprise digital images taken using an SLR camera of at least 12 megapixels. The photography format to be used is:

RAW & JPG

Raw photographs will be white balanced, contrast corrected, and processed from RAW to JPG

Survey

Data collected will include standard formats which maximise use and reuse in the future. The table below conforms to ADS Instructions for Depositors (2021) <https://archaeologydataservice.ac.uk/help-guidance/instructions-for-depositors/files-and-metadata/>.

[illegible]

Photography & Raster Images Photography will be undertaken using: 1. Digital SLR 2. Colour print 3. B/W print 4. Colour side 5. B/W slide ➤ Final Archive Images	Site photographs will be provided in: Joint Photographic Experts Group JPG (.jpg) Raw photo (.CR2, .CR3 or .DNG)
GIS ➤ Site Plans ➤ Survey Data	ESRI Shapefile (.shp,.shx & .dbf, plus associated files) deposited as .zip file

Additional Survey Types (if applicable):

3. Data Storage and Backup

Field Data

Site Records

- 'Born digital' data from AOC's Field Data Manager app data is uploaded to a live SharePoint list on creation and backed up daily.
- Paper records are kept in site folders and removed from site at close of work each day

Photographic Backup Strategy

- Site cameras are removed from site at close of work each day

Digital photographs are recorded onto SD cards and backed up as follows:

- SD cards are downloaded to site laptop and duplicated to external hard drive daily

Survey Data

- Survey data is synced daily to cloud storage and downloaded as a Trimble .job file to the specific project folder on AOCs servers.

Project Data

- The primary data storage location for this project is AOC's on-premises servers
- Sufficient data storage space is available via AOC's servers and via SharePoint backup. The server is accessible by staff on and off-site through a secure log-in, including 2-factor authentication.
- The on-premises server is backed up daily to maintain an up-to-date security copy of the organisation wide data. A working copy is kept in cloud storage.

- Off-site access to the project files on AOC's servers is provided to support back-up of raw data while fieldwork is ongoing.
- Where internet access for data backup is not possible, the raw data will be backed up to a separate media device (such as laptop and portable external hard drive) and transferred to the server at the earliest possible opportunity.
- Project files will be shared with external specialists and contractors directly using the same system, with the wider project team gaining access to only the files needed using permissions-based access.
- Project folders and files will be named following established AOC procedures.
ProjectNumber_name_date (yyyymmdd) and conform to ADS best practice and version control guidance.
- On completion of the project, cloud data will be moved to AOC on-premises servers for long term storage.
- Data intended for digital archive will be structured in the server directory as follows:
 - **Archive**
 - **3D**
 - **Graphics**
 - **GIS**
 - **Photos**
 - **Spreadsheets**
 - **Reports**

4. Metadata

- Metadata tables for each data type will be populated as the project progresses and will use the standard format for each data type as recommended by:

ADS Guides to Good Practice (Niven 2021).

<https://archaeologydataservice.ac.uk/help-guidance/guides-to-good-practice/the-project-lifecycle/project-metadata/>

- Data documentation will meet the requirement of the Project, Museum Deposition Guidelines, Digital Repository Guidelines and the methodology described in the WSI.

5. Ethics and Legal Compliance

- Personally Identifiable Information (PII) will be removed from the archaeological project archive and permission to include individual's names in any reporting will be gained prior to use.
- Copyright for all data collected by the project team belongs to AOC Archaeology Group (AOC Holdings Ltd), and formal permission to include data from external specialists and contractors is secured on the engagement of the specialist or contractor.
- Where formal permissions and/or license agreements are linked to data sharing, details of these will be included in the project documentation folders and will accompany the archaeological project archive.

6. Archive

Digital archive material will be deposited with a trusted digital repository, where data migration and backup procedures are in place, and the integrity of the digital archive is maintained (see Section 1). Where a trusted repository is not specified, digital archive material will be deposited with the county museum on Archival Gold CD.

- Version control will be applied throughout the project in line with AOC standard operating procedures and ADS (2021) ClfA (2019) and HE (2015) guidelines.
- Only the final version of 'born digital' documents (reports, databases, images, survey files) will be selected for inclusion in the Digital Archive. The material de-selected from inclusion in the preserved archive will be duplicates or re-productions created during the lifespan of the project.
- Digital photographs will be assessed during post-excavation and selection based on the principles set out in the ADS (2011) & and HE guidelines (2015).
- **Raw data (all formats) will only be preserved if specifically requested by the Client or specified by local authority requirements, e.g. unprocessed survey, raw photogrammetric data. Where an archive of raw data with an accepted repository (e.g. ADS) is required, a subsequent costing for storage and archiving will be provided.**
- Selection will be defined against the research aims, regional and national research frameworks, specialist advice and the significance of the project results. Selection will be carried out based on the following guidelines:

ADS (2021) Guidelines for Depositors

<http://archaeologydataservice.ac.uk/advice/guidelinesForDepositors>

ADS (2018) Guidance for the selection of material for deposit and archive

<https://archaeologydataservice.ac.uk/advice/selectionGuidance.xhtml>

ClfA (2019) Selection Toolkit for Archaeological Archives

<https://www.archaeologists.net/selection-toolkit>

Historic England (2015) Digital Image Capture and File Storage – Guidelines for Best Practice

<https://historicengland.org.uk/images-books/publications/digital-image-capture-and-file-storage>

7. Data Sharing and Accessibility

Data specific requirements, ethical issues or embargos which are linked to particular data formats will be documented within the relevant metadata tables accompanying the project archive.

- A summary of the project will be included on the OASIS Index of Archaeological Investigation (see Section 1).
- A final version of the project report will be supplied to the Historic Environment Record via OASIS, and any data which they request can also be provided directly.

- The location(s) of the final Archaeological Archive will be added to OASIS when appropriate.
- The Repository in Section 1 will disseminate the digital elements of the Archaeological Archive online under a creative commons licence and the dataset will receive a unique identifier (DOI).

8. Responsibilities

- The Project Manager will be responsible for implementing the DMP, and ensuring it is reviewed and revised at each stage of the project.

The Project Manager is [REDACTED].

- Data capture, metadata production and data quality are the responsibility of the Project Team, assured by the Project Manager with support from the Geomatics Manager and Archives Officer.
- Storage and backup of data in the field is the responsibility of the field team. Data management on site will be supervised by the site lead.

The site lead responsible for field data management is AOC Archaeologist.

- Once data is incorporated into the organisations project server, storage and backup is managed by AOC's IT Support Team.
- Data archiving is undertaken by the project team under the guidance of the Archives Officer with the support of the Geomatics Manager.
- The Archives Officer is responsible for the transfer of the Archaeological Project Archive to the agreed repository.
- Details of the core project team can be provided on request.

9. Additional References

Brown, D.H., 2011. Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation, Archaeological Archives Forum (2nd ed).

https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-799-1/dissemination/pdf/AArchives_v2.pdf

ClfA Dig Digital Online Resource, <https://www.archaeologists.net/digdigital>



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